

December 2008 Update

Basin Mining Area Superfund Site

Jefferson County, Montana
(5-Year Review Date: 5/20/08)

***H**ighlights Since the 2008 Five-Year Review*

- **Goal set to remove waste piles in 2009 and transport to Luttrell repository.**

Brief Site History: The Basin Mining Area Superfund Site is located within and around the town of Basin in Jefferson County, Montana. The Superfund Site was organized into two operable units (OUs): the community of Basin, Montana (Town of Basin OU1), and the surrounding watersheds of Basin Creek, Cataract Creek, and part of the upper Boulder River (Watershed OU2).

Hard rock mining in the Basin Mining Area Superfund Site began in the 1870s and continued intermittently into the late 1950s. Primary sources of contamination consist of numerous scattered mine waste rock piles and tailings piles resulting from historical mining and ore processing in the town of Basin in the late 1800s and early 1900s. The chemicals of potential concern for this site are: antimony, arsenic, cadmium, copper, iron, lead, manganese, mercury, thallium and zinc. Historical mining activities upstream of the town are also a source of contamination due to discharges to Basin Creek, which passes directly through town, or to the Boulder River on the south edge of town. Releases from these sources have resulted in contamination of soil, surface water, sediment, groundwater, air, and biota. Evidence of these releases includes elevated concentrations of contaminants in soil, surface water, and sediment; visual staining of stream sediments; observed mine wastes on stream banks; and noticeable erosion of wastes away from source piles.

Cleanup Activities Completed: USEPA completed a Time-Critical Removal Action in 1998 in an area located at the south end of Valley Street in the town of Basin. Approximately 5,000 cubic yards of contaminated soil/tailings were excavated and disposed of at the mine waste repository in Butte, Montana. After confirmation sampling, the excavated areas were backfilled with clean soil, graded, fertilized, seeded, and mulched. Cleanup of the early removal site was performed to Record of Decision (ROD) specifications.

The Remedial Action (RA) for the Town of Basin OU1 was conducted between 2002 and 2004. All mine waste source areas identified in the final basis of design report (CDM, 2001) were remediated. All but one of the residential properties identified in the final basis of design report (CDM, 2001) were remediated. The lone exception (10 Gold) was not remediated because the property owner decided not to grant USEPA access for cleanup activities. The Basin Mill

facility represents the only industrial site that was not remediated during this cleanup action. Additional residential and mine waste source area properties not included in the original 'final basis of design reports' were identified through sampling between 2002 and 2004 during RA construction. These properties were remediated as directed by USEPA. RA construction was completed in fall 2004.

Current Status: The selected remedy for OU1 addressed the direct exposure of the human population to elevated concentrations of hazardous substances, pollutants, and contaminants in residential soil and residual mine waste by removal and placement of these source materials in an offsite repository (Luttrell Repository). Clean borrow material was imported to replace excavated contaminated material and the areas (both residential and nonresidential) were revegetated.

Summary of Protectiveness: Response actions carried out for the Town of Basin OU1 have addressed the immediate threats, but the remedy is not yet fully protective until institutional controls are fully implemented.

Issues Impacting Protectiveness: Once institutional controls are implemented, the remedy should be considered protective.

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Five-Year Review 2008 Update Table
(Review Date: 5/20/08)**

Issues	Recommendations/ Follow-Up Actions	Follow-Up Actions (Status/Due Date)	Status of Follow-Up Actions 12/08	Responsible Party
1) Institutional controls need to be implemented.	Develop and file property deed restrictions with County for unremediated property and properties with residual contaminated soil under structures.	6/2008	Completion now planned in 2009.	EPA
	Develop fact sheet to educate property owners and recreationist about the acceptable use of Basin Creek water until OU2 can be cleaned up.	6/2008	Completion now planned in 2009.	EPA
	Monitor the 19 Gold Street (unremediated property), 86 Frontage Rd/46 Quartz (residual contamination under structures) and periodically inspect other capped and remediated areas for excessive erosion and lack of vegetation. (Biannual monitoring through next five-year report.	6/2008	Monitoring completed summer of 2008	EPA
2) Basin Mill site was not remediated, nor was it assessed as part of this five-year review. However, it is identified as an issue of concern because of its proximity to the east end of town.	Implement a Unilateral Administrative Order against property owner or formally include in the clean up of OU2, Basin Watershed.	12/2008	Mill site owner is not owner of the waste piles. Seeking funding to remove waste piles and transport them to Luttrell repository in 2009.	EPA